

CLAIMS

What is claimed is:

- 5 1. A medical retrieval device comprising:
a handle;
two gear racks movably mounted with respect to said
handle for longitudinal movement;
a pinion rotatably mounted with respect to said handle so
10 as to engage said two gear racks such that rotation of
said pinion moves said gear racks in opposite
directions;
a basket having at least three legs, an adjacent two of
said legs being connected to a first one of said gear
15 racks, and the remainder of said legs being connected
to a second one of said gear racks such that rotation of
said pinion displaces said two legs in a first direction
and displaces the remainder of said legs in a second
direction different from said first direction.
- 20 2. The medical retrieval device of Claim 1, further
comprising a slide attached to said handle for longitudinal
movement with respect thereto along a path between a rearward
location and a forward location,
25 wherein said racks and said pinion are mounted with
respect to said handle by said racks and said pinion
being mounted to said slide, which is in turn mounted
to said handle.

3. The medical retrieval device of Claim 2, further comprising a hollow sheath extending forward from said handle, said sheath having a forward end, and said basket being located at a forward end of said sheath;

5 said basket being operatively associated with said slide
 such that said basket is retracted within a forward
 portion of said sheath when said slide is in said
 rearward location, and said basket is extended forward
10 of said forward end of said sheath when said slide is in
 said forward location;
 whereby longitudinal movement of said slide extends
 and retracts said basket.

4. The medical retrieval device of Claim 1, further
15 comprising:

 a slide attached to said handle for longitudinal movement
 with respect thereto along a path between a rearward
 location and a forward location,
 a hollow sheath mounted to said slide and extending
20 forward from said handle, said sheath having a forward
 end, and said basket being located at a forward end of
 said sheath,
 said sheath being operatively associated with said slide
 such that said sheath is retracted to expose said basket
25 when said slide is in said rearward location, and said
 sheath is extended forward to cover said basket when
 said slide is in said forward location;
 whereby longitudinal movement of said slide extends
 and retracts said sheath.

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5. The medical retrieval device of Claim 1, further comprising a wheel operatively associated with said pinion such that rotation of said wheel rotates said pinion to displace said basket legs.

5 6. The medical retrieval device of Claim 3, further comprising a pair of tubes telescopically disposed within said sheath, a first one of said pair of tubes being connected to said first one of said gear racks, and a second one of said pair of tubes being connected to said second one of said gear racks, and wherein said adjacent two basket legs are connected to said first one of said gear racks by said adjacent two basket legs being connected to a forward end of said first tube, and
10 wherein said remainder of said basket legs are connected to said second one of said gear racks by said remainder of said basket legs being connected to a forward end of said second tube.

15 7. The medical retrieval device of Claim 1, wherein said basket further comprises a tip member, wherein said basket legs each comprise a forward end, and wherein said forward ends of said basket legs are connected to said tip member.

20 8. The medical retrieval device of Claim 7, wherein said tip member comprises a hole formed therein, and wherein said forward ends of said basket legs are connected to said tip member by inserting said forward ends of said basket legs into
25 said hole and anchoring said forward ends of said basket legs within said hole.

30 9. The medical retrieval device of Claim 8, wherein said tip member is deformable, and wherein said forward ends of said basket legs are secured within said hole by inserting said forward ends of said basket legs into said hole and deforming said tip member so as to clamp said forward ends of said basket legs within said hole.

10. A medical retrieval device comprising:

a handle;

a gear rack movably mounted to said handle for longitudinal movement with respect to said handle;

5 a pinion rotatably mounted with respect to said handle so as to engage said gear rack such that rotation of said pinion translates said gear rack;

10 a basket having at least three legs, at least one of said legs being connected to said gear rack, and the remainder of said legs being connected to said handle such that rotation of said pinion translates said gear rack to move said at least one of said legs relative to the remainder of said legs.

15 11. The medical retrieval device of Claim 10, further comprising a slide attached to said handle for longitudinal movement with respect thereto along a path between a rearward location and a forward location,

20 wherein said rack and said pinion are mounted with respect to said handle by said rack and said pinion being mounted to said slide, which is in turn mounted to said handle; and

25 wherein the remainder of said legs are connected to said handle comprises the remainder of said legs being attached to said slide, which is in turn mounted to said handle.

12. The medical retrieval device of Claim 11, further comprising a hollow sheath extending forward from said handle, said sheath having a forward end, and said basket being located at a forward end of said sheath;

5 said basket being operatively associated with said slide such that said basket is retracted within a forward portion of said sheath when said slide is in said rearward location, and said basket being extended forward of said forward end of said sheath when said
10 slide is in said forward location;
whereby longitudinal movement of said slide extends and retracts said basket.

13. The medical retrieval device of Claim 10, further comprising:

15 a slide attached to said handle for longitudinal movement with respect thereto along a path between a rearward location and a forward location,
a hollow sheath mounted to said slide and extending
20 forward from said handle, said sheath having a forward end, and said basket being located at a forward end of said sheath,
said sheath being operatively associated with said slide such that said sheath is retracted to expose said basket
25 when said slide is in said rearward location, and said sheath being extended forward to cover said basket when said slide is in said forward location;
whereby longitudinal movement of said slide extends and retracts said sheath.

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14. The medical retrieval device of Claim 10, further comprising a wheel operatively associated with said pinion such that rotation of said wheel rotates said pinion to displace said gear rack.

15. The medical retrieval device of Claim 10, wherein said basket comprises:

5 a plurality of legs each having a forward end; and
a tip member having a hole formed therein;
said forward end of each of said plurality of legs being
received within said hole in said tip member and
secured therewithin.

10 **16.** The basket of Claim 15, wherein said forward end
of each of said plurality of legs is secured within said hole in
said tip member by said forward end of each of said plurality of
legs being inserted into said hole and said tip member being
15 crimped so as to capture said forward end of each of said
plurality of legs within said hole.